UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
ENVIRONMENTAL ASSESSMENT

June 27, 2013

MEMORANDUM

SUBJECT: Review of the CISWI Test Plan for Sumitomo Metal Mining Pogo, LLC – Alaska

FROM: Zach Hedgpeth, PE
Environmental Engineer, ESU, OEA

TO: Heather Valdez, Environmental Engineer
Tribal and Air Toxics Unit, OAWT

As you requested, I've reviewed the "Sumitomo Metal Mining Pogo LLC CISWI Test Plan" dated May 2013. Pogo has submitted this test plan coincident with an alternative monitoring petition under 40 CFR 60.2115. I provided comments on the alternative monitoring petition in a memo dated June 21, 2013. The comments below regarding the test plan are meant to complement my earlier comments regarding the alternative monitoring petition.

I have the following comments regarding the test plan. Most of these comments substantively originate in comments received from Stef Johnson at the RTP/EMC in email correspondence of June 11-12, 2013.

1. *Minimum sample volumes.* On page 2-1 of the protocol, the testing firm proposes minimum sample volumes and test run durations. As a general comment, I recommend that the minimum sample volumes for particulate matter (PM), dioxin/furan, and metals be increased in order to achieve better test sensitivity.
    a. *Particulate matter.* The minimum sample volume per run for PM should be 2 dry standard cubic meters (dscm) rather than 1 dscm as proposed. In order to have reasonable confidence in the results from a one hour EPA Reference Method 5 test, at least 6 milligrams of PM would need to be collected, which may not occur over one hour if the incinerator is operating properly and achieves low emission levels. Two hour RM5 runs with minimum sample volume of 2 dscm would decrease the detection limit of the method and increase the mass of PM collected, both of which increase accuracy and confidence in the test results.

b. *Dioxin/furan.* The minimum sample volume per run for dioxin/furan should be 4 dscm rather than 1 dscm as proposed. Larger sample volumes lower the detection limit achievable by the method and therefore increase confidence in any non-detect values. I agree that the lab should use high resolution gas chromatography/mass spectrometry (GC/MS) for the analysis. If the test indicates the dioxin/furan mass is below the detection limit, the test results should be reported and toxicity equivalents (TEQ's) calculated at the method detection limit. Estimated maximum potential concentrations (EMPC's) should be reported as dioxin/furan emissions.

c. *Metals.* The minimum sample volume per run for metals should be 4 dscm rather than 2 dscm as proposed for reasons similar to those described above for PM and dioxin/furan. The sample analysis method for non-mercury metals should be specified as inductively coupled plasma/mass spectroscopy (ICP/MS).

2. *Test run periods should coincide with waste charges.* Test runs should start and stop coincident with waste charging events rather than start or stop partway through a waste charging cycle. For example, a 4-hour test run should include 16 waste charges in their entirety; the run should start when "charge #1" is placed in the combustion chamber and end just before "charge #17" enters the chamber. Testing should only be conducted while maximum waste charging is occurring.

3. *Consistent waste composition each charge.* Each waste charge should consist of waste composition matching the "recipe" to the extent possible. The weight of waste from each source should be weighed for each charge to document the waste mix consistency.

4. *Fuel monitoring.* In addition to the parameters discussed in my comment memo regarding the alternative monitoring petition, secondary fuel usage (propane) should be monitored throughout the testing (meter readings at least once every 15 minutes).

5. *Audit samples.* The test protocol is written to reflect the former audit sample program where the audit samples were provided by EPA. The audit sample program has changed such that audit samples are now available through accredited providers in the private sector. More information on the current audit sample program requirements can be found at the following EPA website: http://epa.gov/ttn/emc/email.html#audit Of the test methods proposed to be conducted on the Pogo Mine incinerator, audit samples are available for Methods 6, 7, and 29.

6. *Electronic reporting.* The test protocol makes no mention of electronic reporting of test results using EPA's Electronic Reporting Tool (ERT). NSPS subpart CCCC is listed as containing electronic reporting requirements; see the EPA ERT website: http://www.epa.gov/ttn/chief/ert/index.html The facility must ensure they comply with the electronic reporting requirements in subpart CCCC.

If you have any questions about these comments, please call me at 3-1217.

C: Mark Filippini, Unit Manager, ESU, OEA
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